

REMARKS

The rejection of Claims 1-6 under 35 U.S.C. § 103(a) as unpatentable over US 4,581,174 (Ohlinger et al), is respectfully traversed.

As recited in Claim 1, an embodiment of the present invention is a process for preparing aromatic diisocyanate by reacting a phosgene with a diamine **in the gas phase**, wherein the reaction is carried out in a reaction zone in which the pressure is more than 3 bar and less than 20 bar and the temperature in the reaction zone is from more than 200°C to less than 600°C. (Emphasis added).

Ohlinger et al is drawn to a process for the continuous preparation of organic isocyanates through the reaction of organic amines with phosgene in the presence of organic solvents under pressure and at elevated temperatures, wherein the hydrogen chloride content in the reaction mixture prior to the addition of the amine is less than 0.5% by weight and wherein the molar ratio of phosgene to NH<sub>2</sub> group in the organic amines is from 12:1 to 200:1 (column 2, lines 52-63). More importantly, it is clear that Ohlinger et al's process is carried out **in the liquid phase**, in view of the above-discussed disclosure in Ohlinger et al of preparing the organic isocyanates in the presence of organic solvents, and the disclosure that suitable inert organic solvents or compounds in which the amines and phosgene are at least partially soluble (column 4, lines 22-24), that the amines may be used undiluted or as solutions in organic solvents (column 4, lines 41-42), of amine feed solution (column 6, line 1), the combined liquid streams (column 6, lines 12-13), as well as the examples (column 8, line 14ff).

Compared to phosgenation in the liquid phase, gas phase phosgenation, among other advantages, has the big advantage of a reduced phosgene holdup, due to better mixability of the gases compared to liquids, and the resulting smaller reaction zone. While Ohlinger et al acknowledge that it is known to manufacture isocyanates from primary amines and phosgene

in either the gas or liquid phase, depending on the nature of the amines (column 1, lines 11-15), it would not have been obvious to modify Ohlinger et al's process to be conducted in the gas phase, absent Applicants' disclosure, since the various characteristics of Ohlinger et al's process, such as its use of organic solvents, temperature, recycle loop, etc., are tied to a liquid phase process.

For all the above reasons, it is respectfully requested that the rejection be withdrawn.

All of the presently-active claims in this application are believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

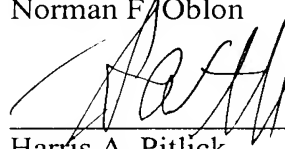
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